

REMARKS

Claims 1-13 remain pending. Favorable reconsideration is respectfully requested.

Applicants would like to thank Examiner Roberts and Examiner Krass for the helpful and courteous discussion held with their representative on November 6, 2006. During the discussion, the differences between the claimed dental bleaching agent and the cited references were discussed. The following remarks expand on the discussion with the Examiner.

The present invention relates to a dental bleaching agent set comprising:

a first component for applying to a tooth surface comprising an organic solvent containing at least one of a nitrogen doped titanium oxide powder and a titanium oxinitride powder which is photocatalytic in the visible spectral region; and

a second component for applying to the tooth surface after the first component comprising a compound that produces hydrogen peroxide in water, a thickener, and a carrier. See Claims 1, 12 and 13.

The rejections of the claims under 35 U.S.C. §103(a) over Montgomery or Nathoo in view of Morikawa et al. are respectfully traversed.

Applicants submit herewith an executed Rule 132 Declaration from Shin Yamaguchi, a co-inventor in the present application. The Declaration describes bleaching effectiveness of a variety of compositions as described at pages 2 and 3. The results of those tests are summarized in the table at the bottom of page 3. As explained by the inventor, the test result demonstrate that using nitrogen doped titanium oxide powder or titanium oxynitride powder is more effective as a bleaching agent as compared to titanium oxide powder.

Montgomery describes a tooth whitening composition. See the Abstract.

Montgomery describes the use of titanium oxide as an accelerator (see paragraph 42 at page 5). The reference fails to disclose a nitrogen doped titanium oxide powder and a titanium oxynitride powder which is photocatalytic in the visible spectral region.

Nathoo discloses a two component aqueous whitening dentifrice composition. See the Abstract. Neither component is a nitrogen doped titanium oxide powder and a titanium oxynitride powder which is photocatalytic in the visible spectral region.

Morikawa et al. describe a porous photocatalytic body which contains nitrogen doped titanium oxide. However, this reference is completely silent with respect to dental applications.

One of ordinary skill in the art would not have been motivated to combine incorporate nitrogen doped titanium oxide into the compositions disclosed by Montgomery or Nathoo based on Morikawa et al. Montgomery and Nathoo each relate to a dental composition but Morikawa et al. is not related to dental applications whatsoever. Since Morikawa et al. do not discuss dental applications at all, one would have no reason to consult such a reference in order to modifying a dental composition as described by Montgomery or Nathoo. Therefore, the combination of Montgomery or Nathoo in view of Morikawa et al. fails to provide even a case of prima facie obviousness. In addition, the impressive results presented in the Rule 132 Declaration demonstrate that nitrogen doped titanium oxide powder or titanium oxynitride powder is more effective as a bleaching agent as compared to titanium oxide powder. Such results would not have been expected from the cited references, since Morikawa et al. is silent with respect to dental applications.

In view of the foregoing, the claimed dental bleaching agent is not obvious over Montgomery or Nathoo in view of Morikawa et al. Accordingly, withdrawal of this ground of rejection is respectfully requested.

Application No. 10/791,783
Reply to Office Action of August 9, 2006

The obviousness-type double patenting rejection based on application serial No. 10/644,808 is believed to be moot since that application is abandoned. Accordingly, withdrawal of that ground of rejection is respectfully requested.

Applicants would like to thank the Examiner for helpful the helpful suggestion regarding the objection to Claim 5. The claim has been amended as suggested by the Examiner. Accordingly, withdrawal of the objection is respectfully requested.

Applicants submit that the present application is in condition for allowance. Early notice to this effect is earnestly solicited.

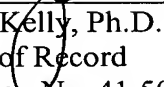
Respectfully submitted,

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